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EXAMINER	
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2193	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/804,033	MCALEAR, JIM A.	
	Examiner	Art Unit	
	Tuan A. Vu	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/17/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the application filed 3/19/04.

Claims 1-17 have been submitted for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 15-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

> The Federal Circuit has recently applied the practical application test in determining whether the claimed subject matter is statutory under 35 U.S.C. § 101. The practical application test requires that a " useful, concrete, and tangible result" be accomplished. An "abstract idea" when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. § 101, is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The test for practical application is thus to determine whether the claimed invention produces a "useful, concrete and tangible result".

The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result. The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. §101.

<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf>

Specifically, claim 15 recites a 'computer readable media' having readable instructions/code thereon. As scanned from the Specifications (see *wireless* - Specifications, pg. 27, or para 0044), this form of medium for embodying computer instructions can be stored as tangible device or transmitted as medium of **wireless** techniques. The nature of the so-claimed medium amounts to non-tangible material, therefore, does not belong any of the 4 statutory

categories. Hence, the claim does not belong to any statutory category; and is deemed not sufficient to fulfill the basic requirement of the § 101 statute (refer to the § 101 Guidelines PDF file: sec IV, B - pg. 14-15).

Claims 15-16 are rejected for not belonging to any category of claimed subject matter.

4. Claims 9-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Specifically, claim 9 recites a user interface comprising on-screen buttons, representation as shapes, a grid, and activating a control by a user. As a whole, the claim depicts listing of software-implemented objects typical in a GUI tool; thus, this claimed interface does not sufficiently convey inclusion of a computer or any hardware to embody or support any functional aspects of said GUI/interface components. Absent hardware or equivalents to enable software execution in terms of computer data transformation in order to materialize any functionality of said software into real-world results, the claim amounts to listing of mere 'Functional Descriptive Material' and thus is rejected for not sufficiently providing hardware to realize descriptive software functionality into tangible, useful, and concrete result. In light of the 101 Guidelines (see Annex IVa, pg. 53-54) mere listing of software descriptive components would be treated as non-statutory subject matter.

Claims 10-14 for failing to remedy the above lack of hardware support are also rejected.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: there is no enabling relationship that would describe how the predetermined compact shape containing a specific operation can --contradictorily -- become adjacent elongated shape representing objects **upon which** operations (represented by said predetermined shape) are executed.

That is, claim 1 (and claim 15) recite 'representing operations on or between objects as compact predetermined shapes, each predetermined shape being adjacent an elongated shape, each predetermined shape containing at least one symbol indicative of a specific operation being represented' (3rd identation) then 'said predetermined compact shapes are adjacent elongated shapes representing objects upon which operations represented by said predetermined shapes are executed' (6th identation). It appears as though the compact shapes not only contain an operation representation but also become the very operated upon 'predetermined shapes'. One of ordinary skill in the art, in light of the Specifications cannot find any implementation details that enable one operation type of shape (icon) to become the target shape/icon being operated by the very operation itself. Thus, one cannot make sense of the relationship between said operation and the structural context by which some particular (compact) shapes contain representation of an operation to execute when these very shapes are being operated upon. This 'adjacent elongated

shapes ... upon which operations ... are executed' would be treated as though the *compact shapes* are in the timeline proximity of (emphasis added) the operated-upon *elongated shapes* specifying an object.

Claims 2-14 fail to remedy to the above; and, likewise, along with claims 16-17 are rejected for indefinite teaching.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-8, 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Moorby et al, USPN: 5,892,507 (hereinafter Moorby).

As per claim 1, Moorby discloses a method of illustrating a process, the method comprising:

representing objects as elongated shapes each containing at least one descriptor (e.g. Fig. 9; col. 3, lines 60 to col. 4, line 15; SVL objects – col. 11, lines 1-4; activation regions - Fig. 12a) to specify an object being represented;

representing operations on or between objects as compact predetermined shapes, each predetermined shape being adjacent an elongated shape (e.g. Fig. 10A-B; Figs 2a-d; *Welcome, Diversion, Video 1, Goto #1* - Fig. 27), each predetermined shape containing at least one symbol indicative of a specific operation being represented (e.g. *call spots* – col. 4, lines 10-15; Fig. 10A-B; Fig. 20, 21, 22);

representing a control flow of said process through a connected series of possibly different control segments shapes (e.g. Fig 11C) which form a timeline, said timeline being parallel to the direction of elongation of an object shape such that a sequence of operations executed on or between objects is specified (col. 3, lines 60 to col. 4, line 15; storyline 200 – Fig. 9), wherein

said elongated shapes are spaced (e.g. Fig. 16-17; Fig. 11a-c – Note: called objects in timeline operated upon by iconic call spots --e.g. button-called object-- reads on elongated and spaced shapes – see col. 12, lines 20-35) apart from one another (if more than one);

said predetermined compact shapes are adjacent elongated shapes representing objects upon which operations represented by said predetermined shapes are executed (Fig. 11a-c – Note: action icons -- col. 12, lines 20-35, *proximity*, col. 3, lines 42-46 -- being adjacent to icons of timeline reads on compact shapes being adjacent to the elongated shapes being operated upon);

said predetermined compact shapes are connected by lines (see Fig. 12B – Note: activation region icon being linked by a Button – *Button2, icon3* -- icon reads on compact shapes being connected to alongated shapes) to elongated shapes representing objects from which operations represented by said predetermined shapes are executed;

different predetermined compact shapes are use to represent operations which modify an object (see Fig. 2 a-d; <Go to #2> - Fig. 27; adding or deleting - col. 10, line 11-21) and operations which do not modify an object (see Welcome 906, Video 1 912 – Fig. 27);

said control segment shapes each define an elongated strip perpendicular to the timeline (see Fig. 27);

each of said predetermined compact shapes being located in a strip (Fig. 12B; Fig. 14-16) and each section of said timeline being located in a strip such that said operations represented by said predetermined compact shapes in a strip are executed according to said flow control mechanisms (Figs 12; Fig. 24) represented by said timeline segment located in said strip;

each strip contains a portion of at least one of said elongated shapes such that for each strip it is illustrated that operations on or by said object represented by said at least one elongated shapes (e.g. Fig. are represented by predetermined compact shapes located in said strip and said operations are to be executed according to control mechanisms (e.g. Fig. 2a-d; Fig. 10b; *action interposed between call spot* – col. 9, line 56-65; *use is satisfied ... user can modify* - col. 10, line 11-21 – Note: event based operations using icon shapes --Event Handler – col. 11, lines 10-32; Fig. 26; Go to #2 - Fig. 27 – to interpose event handling in the middle or to branch away from the flow of the timeline reads on control mechanism by which user can modify the flow) represented by said timeline segment in said strip.

As per claims 2-3, Moorby discloses representing list assignments and parameter specifications as a separate shape containing details of said assignments and parameters (e.g. Function IsZtl18, Sub setZ – Fig. 25a-b); representing mathematical expressions as a separate shape, said shape containing said mathematical expressions (e.g. evaluation function – col. 16, lines 30-50; Sub IncrZ - Fig. 25B).

As per claim 4, Moorby discloses wherein said process is a real-time process, and with the method including unique shapes for objects, operations and control flow segments to distinguish the treatment of real-time aspects of the process (see col. 10, line 8-37; Fig. 10a-b –

Note: user's viewer and clicking action by user along with event-based process flow as a result of user action reads on real-time intervening from developer).

As per claim 5, Moorby discloses wherein said flow control mechanisms includes at least one mechanism selected from a group comprising: looping (Fig. 2c; Fig. 2f); conditional branching (Fig. 2b, 2d; *<IsZeq17> 816*– Fig. 25B); nested looping; nested branching; exception branching (e.g. *if ... terminates before ... all activity ... will terminate* – col. 14, lines 56-67); and the handling of threads (Fig. 5; col. 15, lines 18-40).

As per claim 6, Moorby discloses notations included for said objects and related operations can represent collections including one or more of: an array (Midi 40 – Fig. 4a; Fig. 13a); a table (BMAP 38 – Fig. 4a); a file (Video1 30, Script 52, Metafile 42 – Fig. 4a); a queue (Tline 58 – Fig. 4B); a tree structure (OMF 48 – Fig. 4a); and a software variable (variable Z – Fig. 25).

As per claim 8, Moorby discloses operations selected from a group comprising: selecting (e.g. col. 4, line 67 to col. 5, line 5; col 11, lines 40-45); substitution (Go to – Fig 24, 27); formatting (col. 9, lines 27-29; color fading - Fig. 28 and related text); making assignments (e.g. *Global Z, Sub SetZ, Z= 0* – Fig. 25A); making state changes (col. 9, lines 27-29; col. 15 lines 59-62); making computations (Fig. 25B); and returning values (e.g. *InCrZ, IsZeq17* – Fig. 25B).

As per claim 15, Moorby discloses a computer readable media having encoded thereon computer readable code for implementing a method of illustrating a process, the method comprising:

representing objects as elongated shapes each containing at least one description specifying an object being represented;

representing operations on or between objects as predetermined compact shapes, each predetermined shape being adjacent an elongated shape, each predetermined shape containing at least one symbol indicative of a specific operation being represented;

representing a control flow of said process as a connected series of control segment shapes forming a timeline, said timeline being parallel to the direction of elongation of an object shape such that a sequence of operations executed on or between objects is specified;

wherein

said elongated shapes are spaced apart from one another (if more than one);

said predetermined compact shapes are adjacent elongated shapes representing objects upon which operations represented by said predetermined shapes are executed;

said predetermined compact shapes are connected by lines to elongated shapes representing objects from which operations represented by said predetermined shapes are executed;

different predetermined compact shapes are use to represent operations which modify an object and operations which do not modify an object;

said control segment shapes each define an elongated strip perpendicular to the timeline;

each of said predetermined compact shapes being located in a strip and each section of said timeline being located in a strip such that said operations represented by said predetermined compact shapes in a strip are executed according to said flow control mechanisms represented by said timeline segment located in said strip;

each strip contains a portion of at least one of said elongated shapes such that for each strip it is illustrated that operations on or by said object represented by said at least one elongated shapes are represented by predetermined compact shapes located in said strip and said operations are to be executed according to control mechanisms represented by said timeline segment in said strip;

i.e. all of which limitations having been addressed in claim 1.

As per claims 16-17, Moorby discloses wherein said process is a software process (e.g. programming attributes – col. 2, lines 24-31; SVL – col 3, lines 8-35; Fig. 25a-b; Fig. 12a; Go to, Go back – Fig. 27).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 7, 9-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Moorby et al, USPN: 5,892,507, further in view of Charisius et al., USPN: 7,055,131 (hereinafter Charisius).

As per claim 7, Moorby discloses representing relationships between objects as links between said objects, said links being independent of the timeline (e.g. story 42 – Fig. 11c; OMF3 612 – Fig. 21 – Note: execution of <story> and <OMF> icons functionality entails realization of links -- inside said functionality-- between objects that are independent from the main timeline). However, Moorby does not explicitly disclose that the links representing relationship also have the ability to represent relationships such as components inheritance,

definitions and database table relationships. Moorby discloses reuse of objects in an authoring tool including library for the author to select objects from (see col. 4, line 67 to col. 5, line 5; *library* – col. 6, line 65 to col. 7, line 5), a meta file and OMF object having therein representation of meta information interrelating objects of a framework (see Meta 588, OMF 612, Fig. 20-21). This is reminiscent of in software development wherein a repository (database or library) of reusable objects can be interrelated via definitions of a form of meta-information (Meta file) that enable rebuilding and interlinking (as suggested by Moorby: (e.g. *linking* - col. 10 ,lines 11-29) these database objects such as re-structuring or modeling during authoring runtime a framework of objects (OMF) as set forth above. Charisius discloses in an authoring system for development of object-oriented type of software process, using meta information (TMM – Fig. 2) to interrelate stored package of objects or class in Microsoft template library (e.g. Fig. 9; Fig. 4) consistent with the concept of Object-oriented reusable package (see Polymorphism - Table 8, col. 12) using UML and Rationale Rose (UML – col. 18, lines 25-32); and similarly to Moorby discloses a tool to animate a program flow/process via a time-based GUI representation of event-icon acting via links upon a linear sequential representation of the objects flow (see Fig. 13-14, 21). It would have been obvious for one skill in the art at the time the invention was made to implement the meta file and the OMF by Moorby so the interrelationship (or links) among objects therein represent relationship of OO objects consistent with inheritance (as in UML or Rationale Rose), definitions (as by meta-information) and database table relationships (as queried from any retrieval of OO package or source repository of reusable OO objects) as evidenced above by Charisius. One would be motivated to do so because at the time the invention was made, reusability of objects being stored and queried from

a repository based on a meta information within an instance of a framework type for software construction was a well known concept as mentioned by Charisius (see Fig. 1), and using repository of OO packages in conjunction with metadata as shown in Moorby's OMF and Metafile would enable modeling and framework support for interrelating objects used within a process animation endeavor such as Moorby including benefits from their inheritance and how they are re-instantiated and validated based on their regulated database store (as in RDBMs) and hierarchy as evidenced in Charisius' use of persisted objects assembled for a instance model (see Fig. 10-26).

As per claim 9, Moorby discloses a user interface for use in navigating a computer aided design software package, the user interface comprising:

a first set of activatable on-screen buttons (or other use activated controls such as name or menu controls), each one of said first set representing a predetermined compact shape representing an operation on or between objects (. Fig. 10A-B; Figs 2a-d; *Welcome, Diversion, Video 1, Goto #1* - Fig. 27; *call spots* – col. 4, lines 10-15; Fig. 10A-B; Fig. 20, 21, 22);

a second set of activatable on-screen buttons (or other controls), each one of said second set representing a segment shape representing a flow control mechanism (e.g. Fig. 9; col. 3, lines 60 to col. 4, line 15; SVL objects – col. 11, lines 1-4; *activation regions* - Fig. 12a);

at least one activatable on-screen button (or other control) representing an elongated shape representing an object; wherein there is a grid (possibly visible) for the placement of different shapes to form a diagram (e.g. Fig. 12b; Fig. 14-16; Fig. 20, 23, Fig. 24-25, 27); and upon activating a control for a shape the user may use a mouse or other mechanism to initially

place the selected shape within the grid, and where necessary (e.g. col. 4, line 67 to col. 5, line 5; col 11, lines 40-45; *activation regions* - Fig. 12).

But Moorby does not explicitly disclose a dialog box is presented to the user, to use a keyboard or other controls to enter or select information to complete the information associated with such shape such as: labels, comments, field names, method names etc. to finalize said shape's representation on the screen. Moorby discloses possibility for the user to modify and edit (col. 18, lines 24-34) like in modify time parameters (e.g. col. 11, lines 34-45) in order to have a change in the Timeline scenario. At the time the invention was made, Window system with GUI interface including typical utilities like drop down, dialog box, template field, form, pop-up, task bar was well known concept. Analogous to Moorby interface to enable user to modify parameters, Charisius shows a windows-based panel enabling user to sort and select field related to modifying definition or validation of source code (e.g. Fig. 8A-C) or box to assemble object as well as editing their definition (see Fig 12-26). Based on the above well-known Windows utilities, it would have been obvious for one skill in the art at the time the invention was made to implement the editor interface in Moorby so that a dialog box is presented to the user as in a Window (as in Charisius) panel structure to allow Moorby's user or author to modify labels, comments, fields, and code method names in order to achieve finalization of the TimeLine Scenario contemplated by Moorby (as set forth above), because using Window-based components like dialog box, drop down menu, text field or templates (as set forth in the modeling by Charisius) to modify definition of objects would significantly increase the real-time capability of the developer in order to immediately address the needed changes to a scenario as

endeavor by Moorby; and yet allow the user have direct visual contact with the screen console as shown in Charisius, using well-known utilities by Windows to alleviate costs.

As per claim 10, refer to the corresponding rejection as set forth in claim 8.

As per claim 11, refer to the corresponding rejection as set forth in claim 5.

As per claim 12, refer to the corresponding rejection as set forth in claim 6.

As per claims 13-14, refer to the corresponding rejection as set forth in claims 2-3.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (571) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 (for non-official correspondence - please consult Examiner before using) or 571-273-8300 (for official correspondence) or redirected to customer service at 571-272-3609.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan A Vu
Patent Examiner,
Art Unit 2193
December 28, 2007